Remarks

This reply is in response to the Office communication dated October 13, 2005. Unless otherwise indicated, page references are to that communication.

Claims 1-13

Claim 1, upon which the remaining claims of this group are based, has been amended to recite that the character conversion is performed "by one or more invocations of a hardware instruction for converting a source string of characters to a target string of characters," where each such invocation "ha[s] as arguments a string of said source characters and a table for converting between said source characters and target characters in accordance with one of said sub-codepages" and "continu[es] to process a string of source characters until it encounters a character that cannot be converted." Support for both of these recitations may be found in the specification at page 8, lines 19-26.

More specifically, the two arguments correspond to the second operand and translation table, respectively, of the Translate Two to One (TRTO) instruction referenced in the specification, while the "character indicating that a particular input character can not be converted" referenced on line 24 corresponds to the test character that results in completion of the TRTO instruction, as described at pages 3 to 4 and 7-152 to 7-157 of the z/Architecture Principles of Operation, SA22-7832-00 (Dec. 2000), supplied with the previous amendment.

Claim 4 has been cancelled, as its recitations now substantially duplicate those of claim 1 as amended.

As amended, claim 1 and the claims dependent thereon are believed to distinguish patentably over the art cited by the Examiner, in particular, U.S. Patent 6,204,782 to Gonzalez et al. ("Gonzalez").

As previously discussed, Gonzalez shows a general hardware block diagram of a general-purpose computer in Fig. 10, as well as a flow diagram of a relevant code conversion method in Fig. 7. However, while the two algorithms may be similar in certain respects, and while a single hardware instruction in Gonzalez may set off a chain of events sufficient to complete the algorithm, this is where the similarity ends. Gonzalez gives no teaching of how he implements his Fig. 7 routine other than the usual generalities commonly found in computer patents, for example at column 19, lines 54-65. There is no teaching of how to efficiently accomplish such an algorithm, and certainly no mention of a hardware instruction having as arguments a string of source characters and a table for converting between the source characters and target characters in accordance with a sub-codepages, as claimed by applicant. Nor is there any teaching of using a hardware instruction that continues to process a string of source characters until it encounters a character that cannot be converted, also as claimed by applicant.

It should be noted that the Examiner does not argue that applicant's use of a hardware instruction to perform a code conversion as claimed in claim 1 is made obvious by Gonzalez. Rather, the Examiner has opted to reject claim 1 (along with several dependent claims) as being anticipated by Gonzalez. However, given Gonzalez's complete silence on the use of particular hardware instructions, this reference failed to anticipate claim 1 even as earlier presented. Certainly it does not anticipate claim 1 as currently amended.

For the foregoing reasons, applicant respectfully submits that claim 1 as amended and the claims dependent thereon distinguish over the art cited by the Examiner.

Claims 14-20

Claims 14-20 are directed to that feature of applicant's invention whereby the sub-codepages other than the highest-priority sub-codepage comprise a first set of one or more higher-priority sub-codepages and a second set of one or more lower-priority sub-codepages. If a character is found in a sub-codepage belonging to the first set of sub-codepages (i.e., the higher-priority sub-codepages), the conversion process is continued with that sub-codepage as the current sub-codepage. On the other hand, if the character is found in a sub-codepage belonging to the second

set of sub-codepages, the character is converted using that sub-codepage and the conversion process is continued with the highest-priority sub-codepage as the current sub-codepage.

Claims 14-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonzalez (page 4, ¶ 6).

As has previously been discussed, Gonzalez describes two different approaches to character conversion. In the first, he always reverts to a preferred target encoding after switching to a different target encoding (col. 6, lines 45-48). In the second, after switching to a different target encoding, he continues to use that target encoding until he has to switch again (col. 6, lines 48-51).

The Examiner argues that Gonzalez teaches "the characteristics" of applicant's claimed first and second sets of sub-code pages, "but specifically teaches them individually" (page 10). As the Examiner elaborates in his response to applicant's previous arguments (page 10):

> [T]he modification the Examiner proposes to Gonzalez is to use the first and second approach together. By using the first and second approach together, two sets of sub-codepages would have been created, each corresponding to one approach. Therefore, such a modification to Gonzalez, using teachings of Gonzalez, would have created the claimed first and second sets which then has the advantages of both the first and second approaches taught by Gonzalez. It is for these reasons that the Examiner maintains that Gonzalez teaches and suggests all of the limitations as presented in independent claim 14.

Applicant respectfully disagrees. While Gonzalez may be said to teach two aspects of applicant's invention individually, they are taught as alternatives and not as approaches that could be combined in a single embodiment. Furthermore, applicant's claimed invention is not simply matter of "using the first and second approach together" as suggested by the Examiner. Indeed, such a characterization trivializes the design considerations involved. How does one decide when to use one approach or the other? Does one use the codepage miss rate, the identity of the current

codepage, or what? There is nothing in Gonzalez to suggest, even in a general manner, the answers to either of these questions.

Certainly there is nothing to suggest grouping sub-codepages other than the highest-priority sub-codepage into a first set of higher-priority sub-codepages and a second set of lower-priority sub-codepages and basing one's actions on the set to which a sub-codepage belongs, as claimed by applicant. If the asserted combination is evident at all, it is evident only in hindsight after studying applicant's claimed invention.

For the foregoing reasons, applicant respectfully submits that claims 14-20 distinguish patentably over the art cited by the Examiner.

Conclusion

Entry of this response and reconsideration of the application are respectfully requested. It is hoped that upon such consideration the Examiner will hold all claims allowable and pass the case to issue at an early date. Such action is earnestly solicited.

Respectfully submitted,
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